

by placing its thumb on the scale of competition, the Commission by this Rule has distorted and restricted competition in other ways affecting program producers, syndicators, independent stations, new networks, and network affiliates.

The Rule has come to be seen largely as a measure to promote the fortunes of independent and UHF stations. The evidence shows that today many independent stations are more profitable than affiliates. Further, UHF affiliates of ABC, CBS and NBC are victims of the Rule, yet on average are financially weaker than UHF independents, intended beneficiaries of the Rule. Furthermore, any "handicap" affecting independent UHF stations in the past has been reduced or eliminated, due to forces other than PTAR.

The economic costs, penalties, restrictions and consumer harms caused by PTAR cannot be justified by an increase in diversity, because PTAR has not increased diversity. The number of outlets for local broadcast programming is unchanged by the Rule. The number of sources of programming available to those outlets is reduced by the terms of the Rule. There is no basis to believe that the Rule enhances the diversity of prime-time broadcast program content (or the variety of viewpoints), and there are some reasons to believe that diversity has been reduced. In any event, the flowering of new media alternatives makes irrelevant whatever marginal change in broadcast network affiliate content diversity, if any, can be attributed to the Rule.

Appendix A Data tables

Table A-1 Prime-time shares by season 1964/65 to 1993/94

Date	ABC	CBS	NBC	Fox
1964/65	31.3	31.5	31.3	
1965/66	29.5	33.3	32.2	
1966/67	28.8	32.9	32.3	
1967/68	27.5	34.0	31.4	
1968/69	26.0	33.1	33.0	
1969/70	26.7	32.3	32.2	
1970/71	27.8	31.3	31.3	
1971/72	29.5	32.6	31.1	
1972/73	28.2	32.0	30.9	
1973/74	28.4	33.8	30.0	
1974/75	26.8	33.8	32.3	
1975/76	31.1	32.2	29.1	
1976/77	34.4	29.9	29.0	
1977/78	33.4	30.3	29.2	
1978/79	34.0	30.1	27.4	
1979/80	31.4	31.3	27.8	
1980/81	28.7	31.3	26.2	
1981/82	28.8	30.3	24.2	
1982/83	27.9	28.7	23.8	
1983/84	27.1	28.4	23.5	
1984/85	24.4	26.7	25.6	
1985/86	23.4	26.2	27.5	
1986/87	22.4	25.1	28.2	7.3
1987/88	22.5	22.0	26.2	5.9
1988/89	21.0	20.8	25.6	8.9
1989/90	21.5	20.2	24.1	10.6
1990/91	20.8	20.5	21.1	10.5
1991/92	19.9	22.6	20.2	13.0
1992/93	20.3	21.8	18.0	12.4
1993/94	20.1	22.7	17.8	11.4

Source: ABC Affiliate Relations, based on NIELSEN TELEVISION INDEX (various years), network season.

Table A-2 Fox affiliates in the U.S.

Year	Number
1987	106
1988	115
1989	125
1990	131
1991	134
1992	140
1993	139
1994	141
1994 (Sept.)	199

Source: Fox Broadcasting Company, May of year noted. Fox began to include its secondary affiliates in September 1994.

Table A-3 Independent commercial stations in the U.S.

Number	Number	Number
25	69	160
26	73	186
28	75	214
29	77	255
32	79	293
36	84	310
41	89	321
50	94	339
58	106	345
59	113	355
62	135	422
		438

Source: INTV. All data through 1991 are year-end. The 1992 figure is from March 1993. The 1993 figure is from February 1994.

Table A-4 Low-power television stations in the U.S.

Fiscal year	Number
1988	523
1989	726
1990	935
1991	1085
1992	1211
1993	1310

Source: FCC Annual Report to Congress. The low-power television service was established March 4, 1982.

Table A-5 Cable networks in the U.S.

Year	Regional networks†				Total
1976					
1977					
1978					
1979					
1980					
1981					
1982					
1983					
1984					
1985					18
1986					20
1987					24
1988					30
1989					37
1990					37
1991					39
1992					41
1993					42
1994*					43

Source: NCTA, CABLE TELEVISION DEVELOPMENTS Fall 1994. *1994 data are through September. †TELEVISION & CABLE FACTBOOK, SERVICES (various years).

Table A-6 Cable service in the U.S.

Year	TV house-holds (millions)	Homes passed (millions)	Cable subs (millions)	Homes passed per TVHH (percentage)	Cable subs per TVHH
1975	68.5	21.8	9.8	31.8	14.3
1976	71.2	23.1	11.8	32.4	16.6
1977	72.9	24.2	12.6	33.2	17.3
1978	74.5	26.8	14.2	36.0	19.1
1979	76.3	29.3	15.8	38.4	20.7
1980	79.9	34.9	19.2	43.7	24.0
1981	81.3	41.8	23.0	51.4	28.3
1982	81.9	49.5	27.5	60.4	33.6
1983	83.3	55.9	31.4	67.1	37.7
1984	84.9	60.5	34.2	71.3	40.3
1985	86.5	64.7	36.7	74.8	42.4
1986	87.7	69.4	39.7	79.2	45.3
1987	89.2	73.1	42.6	81.9	47.8
1988	90.9	77.2	45.7	85.0	50.3
1989	91.6	82.8	49.3	90.4	53.8
1990	90.9	86.0	51.7	94.7	57.0
1991	92.0	88.4	53.4	96.1	58.1
1992	93.1	89.4	55.2	96.1	59.3
1993	93.9	90.6	57.2	96.5	60.9
1994	94.9	91.6	59.0	96.5	62.0

Source: KAGAN MEDIA INDEX, Jan.11, 1995, at 7, 14; Feb. 26, 1993, at 2.

Table A-7

**Households subscribing to video programming
through backyard dishes, SMATV and MMDS
(in millions)**

Year	Backyard dishes	SMATV	MMDS (wireless)
1983			0.5
1984		0.4	0.4
1985		0.5	0.3
1986	0.1	0.6	0.3
1987	0.3	0.7	0.2
1988	0.4	0.7	0.2
1989	0.6	0.8	0.1
1990	0.7	0.8	0.2
1991	0.8	0.9	0.2
1992	0.9	0.9	0.3
1993	1.4	1.0	0.4
1994	2.1	1.1	0.6

Source: KAGAN MEDIA INDEX, Jan. 11, 1995, at 7, 14.

**Table A-8 U.S. video cassette expenditures
(consumer rentals and sales in millions of dollars)**

Year	Households with VCRs (millions)	Household video cassette expenditures	Household video cassette rental revenue
1983	9.4	218	1,065
1984	16.9	381	1,827
1985	27.5	656	2,910
1986	38.1	853	4,173
1987	47.6	1,108	5,245
1988	55.3	1,591	6,377
1989	61.3	2,258	7,052
1990	66.0	2,829	7,616
1991	71.2	3,229	7,770
1992	76.1	3,739	8,230
1993	80.5	4,386	8,840
1994	84.5	5,008	9,389

Source: KAGAN MEDIA INDEX, Dec. 29, 1994 at 14, Jan. 11, 1995 at 7.

Table A-9 Average ABC, CBS and NBC shares of all dayparts by season

Season	Cable			Super stations		
	Total	Basic	Pay			
1980/81	3	1	2	3		
1981/82	9	4	5	3		
1982/83	9	4	5	5		
1983/84	11	6	5	6		
1984/85	14	8	6	6		
1985/86	13	8	5	6		
1986/87	19	13	6	4		
1987/88	22	15	7	3		
1988/89	24	17	7	4		
1989/90	27	21	6	4		
1990/91	30	24	6	3		
1991/92	30	24	6	2		
1992/93	30	25	5	0		
1993/94	31	26	5	0		

Sources: NIELSEN TELEVISION INDEX for 1980/81 and 1981/82. CABLETELEVISION ADVERTISING BUREAU, INC., CABLE TV FACTS, 1984-1995, (based on NIELSEN TELEVISION INDEX) for 1982/83 through 1993/1994 data. Notes: Shares are not equivalent to percentages of TVHH and sum to more than 100 percent because some households operate more than one TV set at a time. Independents excludes superstations, and includes Fox affiliates. TBS is counted as a basic cable network starting 1989/90. Superstation WWOR is included in Independents and superstation WGN is included as a basic cable network starting 1992/93.

Table A-10

Average ABC, CBS and NBC shares of U.S. national television advertising revenue (\$ figures in millions)

Year	Nat'l spot	Nat'l synd'n**	Net. as % of total
1970	\$1,234		57.3
1971	1,145		58.2
1972	1,318		57.8
1973	1,377		58.8
1974	1,495		58.9
1975	1,623		58.7
1976	2,154		57.0
1977	2,204		61.1
1978	2,607		60.4
1979	2,873		61.5
1980	3,269	\$50	60.4
1981	3,746	75	58.6
1982	4,364	150	56.7
1983	4,827	300	56.3
1984	5,488	420	56.6
1985	6,004	520	53.1
1986	6,570	600	51.5
1987	6,846	762	50.4
1988	7,147	901	50.5
1989	7,354	1,288	48.1
1990	7,788	1,589	46.6
1991	7,110	1,853	46.0
1992	7,551	2,070	45.8
1993	7,793	2,380	43.7

Source: TELEVISION BUREAU OF ADVERTISING, TRENDS IN GDP AD VOLUME, 1960-1993.

* National Cable data are from VERONIS, SUHLER & ASSOCIATES, COMMUNICATIONS INDUSTRY FORECAST, 1994. **Includes Fox.

Table A-11 Average ABC, CBS and NBC shares of prime-time entertainment series broadcast

Season	Network in-house productions as share of broadcast hours (percentage)		
	ABC	CBS	NBC
1969/70	0.00	1.85	1.78
1970/71	0.00	2.75	1.87
1971/72	0.00	2.40	3.11
1972/73	0.00	2.59	0.83
1973/74	0.00	3.38	0.00
1974/75	0.00	2.49	2.49
1975/76	0.00	2.27	0.00
1976/77	0.00	3.38	2.09
1977/78	0.00	0.00	2.59
1978/79	0.00	2.10	4.62
1979/80	0.00	1.07	5.22
1980/81	0.00	0.00	3.80
1981/82	0.00	0.00	8.11
1982/83	0.00	0.00	2.68
1983/84	0.00	0.00	0.46
1984/85	0.67	0.00	1.91
1985/86	2.13	2.29	0.99
1986/87	2.24	0.55	0.19
1987/88	1.79	0.99	0.73
1988/89	0.79	0.00	0.00
1989/90	0.88	4.37	3.87
1990/91	2.46	7.04	1.83
1991/92	4.05	7.74	1.89
1992/93	6.31	8.57	9.40
1993/94	4.78	10.85	7.03

Source: Appendix E.

Table A-12 Average cash flow for U.S. television stations

	Ave. cash flow
All markets	\$
All ABC, CBS, NBC Affil.	6,137,332
All independents	6,243,501
All VHF independents	18,677,101
All Fox affiliates	5,711,547
ADI markets 1-25	
ABC affiliates	26,907,958
CBS affiliates	20,090,028
NBC affiliates	25,052,565
Fox affiliates	19,605,441
ADI markets 26-50	
ABC affiliates	7,137,498
CBS affiliates	6,324,157
NBC affiliates	6,828,460
Fox affiliates	4,560,791

Source: NATIONAL ASSOCIATION OF BROADCASTERS, 1994 TELEVISION FINANCIAL REPORT. The NAB surveyed all commercial television stations. Usable responses were received from 773 television stations, a response rate of 69.5 percent. Independent stations in this table refer to those stations without an affiliation with ABC, CBS, NBC or Fox.

Table A-13 Percent of TV households using television

TV Season	7:30-8:00 p.m.	8:00-8:30 p.m.	8:30-9:00 p.m.
	Pre-rule base period		
1969/70	61.31	64.47	65.65
1970/71	62.14	65.03	65.98
	Post-rule seasons		
1972/73	60.26	64.20	65.60
1976/77	60.28	64.28	66.11

Source: Appendix I.

Table A-14 Access period (7:30-8:00 p.m.) viewing as percentage of 8:00-8:30 p.m. viewing

TV Season	Viewing 7:30-8:00 as percentage of viewing 8:00-8:30 p.m.
1969/70	95.1
1970/71	95.6
1972/73	93.9
1976/77	93.8

Source: Calculated based on data in Appendix I.

Table A-15 Hours of programming on 94 cable networks, by source

Source	Hours	Percent of total
Movies	3,464	28
Network	1,006	8
Original cable and other	6,913	56
Infomercials	338	3
Sports	585	5
Total	12,306	100

Source: Calculated based on data in Appendix B.

Table A-16 1992 UHF station profitability

Station group	Average cash flow	Average pre-tax profits
UHF affiliates of ABC, CBS and NBC	\$1,480,265	\$165,852
UHF independents	\$2,194,166	\$552,222

SOURCE: NATIONAL ASSOCIATION OF BROADCASTERS, 1993 TELEVISION FINANCIAL REPORT. NAB reports that the usable response rate from all commercial television stations was 72.2 percent for the 1993 Report, which covers 1992 financial results. This is the most recent report with financial results for the UHF affiliates of ABC, CBS and NBC. The 1992 data for UHF independents include Fox affiliates.

Appendix B Programming on cable networks

In order to examine the types of programming appearing on cable networks, Economists Incorporated analyzed the program schedules for 94 basic, regional and premium cable networks. Each program was categorized as either movie, sports, paid programming, off-network (programs originally airing on either ABC, CBS or NBC) or non-network. Non-network programming includes programs that have their original airing on a cable network, first-run syndicated programs and programs that originally appeared in syndication on the Fox network. The results are presented in Table B-1. Of the 12,306 hours of programming examined, 28 percent of the time was movies, 5 percent was sports, 3 percent was paid programming, 8 percent was off-network and 56 percent was non-network.

Table B-1 Summary of cable programming by type

	Movies	Off-net- work	Original cable and other	Paid	Sports	Total
Total Minutes	207,825	60,365	414,780	20,250	35,115	738,335
Percent	28.1	8.2	56.2	2.7	4.8	100.0

The sample of cable networks examined included 60 national basic cable services, 14 regional cable services and 20 national pay cable services.¹¹⁵ The national basic cable services included all but 2 of the 20 largest national networks, and all but 10 of the 50 largest national networks.¹¹⁶ The

¹¹⁵ No pay-per-view services were included in the analysis.

¹¹⁶ The ranking of networks is based on the network subscriber counts reported in Cablevision, Dec. 12, 1994, at 65. Of the fifty largest networks, the ten excluded networks are: The Weather Channel, which presents live programming on weather information; Headline News, which presents live news summaries; C-SPAN II, which provides live coverage of the US Senate; The Box, an interactive, viewer-programmed music video network; Q2, a lifestyle, home-shopping network; Home Shopping Network II, another shop-at-home service; Kaleidoscope: America's Disability Channel, which presents informational programming by and for people

regional cable services reflect a sample of the larger regional basic and pay services. Most regional networks offer either sports or news programming. All of the large premium cable services are included.¹¹⁷ Most of these networks offer movies.

Data on each network's programming schedule were obtained from Tribune Media Services TV Listings (TMS).¹¹⁸ The data cover programs scheduled to start between 6 a.m. and 2 a.m. the following morning for one week, January 8 through January 14, 1995. The TMS data provided the date, start time, title and length of each program. In addition to providing the program schedule for each cable network, TMS provided information as to the type of the program, *e.g.*, movie, sports, paid programming or show. For shows, TMS also supplied the source for the program, *i.e.*, where the show originally aired in the United States. For example, the source for "The Waltons," which airs on the Family Channel, is listed as CBS, while the source for "That's My Dog," which also airs on the Family Channel, is listed as the Family Channel. In this way it is possible to identify which programs on these cable networks originally aired on the ABC, CBS or NBC network.¹¹⁹

with disabilities; Univision, a Spanish-language network; Telemundo, another Spanish language network; and, Z Music, which offers Christian music videos.

117 Premium services excluded from the analysis include ANA Television Network/Arab-Net, Canal Sur, The Filipino Channel, Playboy, Spice, Spice 2, TV Asia, and TV-Japan.

118 Tribune Media Services TV Listings is a division of Tribune Media Services, a wholly owned subsidiary of The Tribune Company. Tribune Media Services TV Listings has more than 13 years of experience in providing TV listings. Its clients include USA Today, the New York Times, the Los Angeles Times, the Chicago Tribune and the Philadelphia Inquirer. It provides TV listings to about 70 of the top 100 circulation papers in the country. It supplies cable programming guides to cable systems nationwide. It also electronically serves cable systems, DirecTV, USSB, America On-Line, e-World and GTE Main Street. It also provides programming data to ASCAP for purposes of music royalty calculations.

119 Some shows were listed without a source. For these programs, two sources were used, ALEX MCNEIL, TOTAL TELEVISION, (1991) and BROOKS & MARSH, *supra* note 111, to determine if the program originally aired on ABC, CBS or NBC. It is also possible that some programs listed as movies are made-for-television movies.

For each cable network, the total number of programming minutes that were movies, sports, paid programming, off-network (programs originally airing on ABC, CBS or NBC), and other were calculated. The other category includes programs that either aired for the first time on a cable network or originally were released as syndicated programming. The results of the analysis for each network are presented in Table B-2.

The aggregate number of minutes and the percentage of total minutes for each category are presented in Table B-1. From Table B-1, only 8 percent of the 12,306 programming hours on these 94 cable networks was originally aired on ABC, CBS or NBC. Considering the types of programming on the cable networks not included in the sample, this estimate is likely to overstate the actual percentage of programming on all cable networks that originally appeared on ABC, CBS or NBC.¹²⁰

An analysis of Table B-2 reveals that only four cable networks, USA, fX, WGN and WWOR (two of which are broadcast superstations), rely on off-network programming for the majority of their program hours.

¹²⁰ See notes 116 and 117, *supra*, for a partial list of the cable networks excluded. Other national basic cable networks excluded are: America's Collectibles Network, Americana Television Network, Canal de Noticias, Caribbean Satellite Network, Cable Health Club, Classic Arts Showcase, Crime Channel, Deep Dish TV Network, Fox Net, fXM, Galavision, The Game Channel, The Game Show Network, Gaming and Entertainment Network, GEMS Television, Golden American Network, The Golf Channel, The Gospel Network, The Idea Channel, Jewish TV Network, Jones Computer Network, KTVT, Las Vegas Television Network, MOR Music Television, MTV Latino, NASA Television, National Access Television, Network 1, The '90s Channel, Product Information Network, SCOLA/News of All Nations, SingleVision, The Talk Channel, TeleNoticias, tv!, TV Food Network, U Network, ValueVision, Via TV Network and the Worship Network. Excluded regional networks are: Arizona Sports, Atlanta Interfaith, Bay Area Religious Channel, Bay TV, Cable TV Network of New Jersey, The California Channel, ChicagoLand Television News, The Ecumenical Channel, La Cadena Deportiva/Prime Ticket, Meadows Racing Network, New York 1 News, NewsChannel 8, News 12 Long Island, Orange County News Channel, Pennsylvania Cable Network, Pittsburgh Cable News Network, PenVision, Prism, Pro-Am Sports, SportsChannel Cincinnati, SportsChannel Florida, SportsChannel Hawaii, SportsChannel New England, SportsChannel Ohio, SportsChannel Philadelphia, Sunshine Network and WFIT.

Table B-2 Minutes of programming on cable networks by type

Channel	Movies	Off-net- work	Original cable and other	Paid	Sports	Total
3 Angels Broadcasting Net.	0	0	8,400	0	0	8,400
Adam & Eve	8,640	0	180	0	0	8,820
American Independent Net.	2,400	510	6,510	60	300	9,780
All News Channel	0	0	8,400	0	0	8,400
American Movie Classics	8,065	0	465	0	0	8,530
Arts & Entertainment	960	3,960	3,630	0	0	8,550
Atlantic Satellite Network	1,735	1,620	4,290	240	0	7,885
America's Talking	0	0	6,540	1,860	0	8,400
Black Entertainment TV	0	360	7,020	1,020	0	8,400
Bravo	3,420	300	3,240	0	0	6,960
Channel America	2,040	300	4,410	1,440	0	8,190
Cinemax	8,310	0	90	0	0	8,400
Cinemax2	8,130	0	30	0	0	8,160
Country Music Television	0	0	10,080	0	0	10,080
CNBC	0	0	7,440	960	0	8,400
CNN	0	30	8,280	0	0	8,310
Comedy Central	480	870	6,330	720	0	8,400
Court TV	0	0	8,400	0	0	8,400
CSPAN	0	0	8,880	0	0	8,880
Disney	3,040	930	4,740	0	0	8,710
Empire Sports Net.	0	0	2,010	30	1,500	3,540
Encore-Action	6,940	550	950	0	0	8,440
Encore	8,415	0	0	0	0	8,415
ESPN	0	0	6,510	0	1,920	8,430
ESPN2	0	0	6,240	0	2,310	8,550
E! Entertainment TV	120	1,110	7,170	0	0	8,400
Eternal Word TV Net.	0	0	8,460	0	0	8,460
The Family Channel	600	2,280	4,110	510	0	7,500
FamilyNet	450	210	6,870	420	0	7,950
First Choice	8,565	0	180	0	0	8,745
Flix	8,240	0	0	0	0	8,240
FX	0	4,500	3,480	420	0	8,400
HBO	7,145	0	1,410	0	0	8,555
HBO2	7,555	0	835	0	0	8,390
HBO3	7,100	0	1,245	0	0	8,345
The History Channel	1,440	240	6,900	0	0	8,580
Home Sports Entertainment	0	0	90	0	300	390
Home Shopping Network	0	0	8,820	0	0	8,820
Home Team Sports	0	0	2,445	1,380	2,595	6,420
Independent Film Channel	8,250	0	180	0	0	8,430
The New Inspirational Net.	120	0	6,600	840	0	7,560
International Channel	0	0	8,370	30	0	8,400

Table B-2, continued

Channel	Movies	Off-net- work	Original cable and other	Paid	Sports	Total
KBL Sports Network	0	120	2,340	450	1,380	4,290
Keystone Inspirational Net.	0	0	7,170	180	0	7,350
KTLA	1,320	2,010	2,040	240	0	5,610
Lifetime	2,130	2,550	2,550	1,170	0	8,400
Encore-Love Stories	8,360	0	115	0	0	8,475
Mind Extension University	0	0	8,310	0	0	8,310
Much Music USA	0	0	7,920	0	0	7,920
Midwest Sports Channel	0	0	3,660	60	3,030	6,750
Madison Square Garden Net.	0	0	1,650	60	2,070	3,780
Main Street TV	3,810	30	3,000	930	540	8,310
MTV	0	0	8,640	0	0	8,640
Encore-Mystery	6,435	1,045	830	0	0	8,310
New England Sports Network	0	0	4,800	30	3,750	8,580
National Empowerment TV	0	60	7,560	660	0	8,280
New England Cable News	0	0	8,550	0	0	8,550
Nickelodeon	0	3,420	4,980	0	0	8,400
NewSport Television	0	0	7,620	300	480	8,400
The Outdoor Channel	1,240	0	6,320	750	0	8,310
Prime Ticket Network	0	0	4,830	1,290	2,340	8,460
Prime Sports Network	0	0	6,300	0	2,100	8,400
QVC Network	0	0	8,400	0	0	8,400
SportsChannel Chicago	0	0	4,680	120	3,300	8,100
Sci-Fi Channel	750	4,080	2,910	660	0	8,400
Shepherds Chapel Network	0	0	8,400	0	0	8,400
SportsChannel New York	0	0	5,550	60	2,970	8,580
SportsChannel Pacific	0	0	1,740	120	900	2,760
Showtime	7,400	0	985	0	0	8,385
Showtime2	8,325	0	160	0	0	8,485
Sportsouth Network	0	0	2,160	270	2,640	5,070
Starz!	7,490	700	510	0	0	8,700
Trinity Broadcasting Network	0	0	8,520	0	0	8,520
Turner Classic Movies	8,490	0	240	0	0	8,730
The Discovery Channel	0	0	7,140	0	0	7,140
The Learning Channel	0	0	8,040	0	0	8,040
The Movie Channel	8,575	0	0	0	0	8,575
The Nostalgia Channel	2,280	3,090	2,010	780	0	8,160
The Nashville Network	0	180	7,110	0	0	7,290
Turner Network TV	3,680	3,180	1,710	0	300	8,870
The Cartoon Network	0	2,730	5,670	0	0	8,400
The Travel Channel	0	0	8,400	0	0	8,400
Encore-True Stories	8,525	0	95	0	0	8,620
USA Network	1,200	4,380	2,520	270	0	8,370

Table B-2, continued

Channel	Movies	Off-net- work	Original cable and other	Paid	Sports	Total
VH1	0	0	8,370	0	0	8,370
Faith & Values Channel	0	0	7,950	420	0	8,370
Encore-Wam!	1,160	255	7,080	0	0	8,495
Encore-Western	8,000	255	220	0	0	8,475
WGN	360	2,010	540	60	0	2,970
World Harvest Television	360	240	8,610	60	0	9,270
WPIX	1,320	1,260	2,760	210	0	5,550
WSBK	1,230	2,310	1,350	630	240	5,760
TBS Superstation	3,225	3,410	1,505	180	150	8,470
WWOR	0	5,280	30	360	0	5,670

Appendix C The UHF handicap

Part of the justification for the implementation of PTAR was the FCC's concern over the weakness of independent UHF stations.¹²¹ This concern was reinforced by academic studies in the 1970s that consistently found that independent UHF stations had smaller audience shares than corresponding VHF stations.¹²² The difference in audience share, holding other factors constant, is often referred to as the "UHF handicap." The existence of a UHF handicap has sometimes been used to justify a differing regulatory treatment of the ABC, CBS and NBC affiliates, which account for most VHF stations. As described below, this rationale for separate regulatory treatment of major network affiliates is no longer plausible.

The most commonly cited measure of the UHF handicap is based on research conducted by R.E. Park for the FCC.¹²³ Using 1977/78 audience share data, Park found that VHF network affiliates had by far the greatest audience appeal, and UHF independent stations had by far the least appeal. Park found a much smaller UHF handicap for cable subscribers.

Park attempted to measure the effect of cable carriage on the UHF handicap, but he had only county-level viewing data. Cable systems within a county do not, in general, carry the same signals. Park dealt with this problem by selecting a sample of counties with only one cable system. These turned out to be chiefly rural counties in the Southeastern United States. For comparability, this study uses the same sample.

The structure of local broadcast television competition has changed substantially since 1978. Then there were 94 independent stations, or an aver-

121 FCC, In the Matter of Amendment of Part 73 of the Commission's Rules and Regulations with Respect to Competition and Responsibility in Network Television Broadcasting, 23 FCC 2d 394-395 (May 4, 1970) (No. 12782).

122 See Rolla E. Park, *Audience Diversion Due to Cable Television: Response to Industry Comments*, RAND, N-1334-FCC, Nov. 1979.

123 *Id.*

age of less than one half for each of the more than 200 Nielsen designated market areas (DMAs); by 1993 there were 438 full-power independent stations—or more than two per DMA—and more than 1,300 low-power stations.

Television viewing options have also changed since 1978. Then, 80 percent of households watched television from off-the-air signals only, for which the UHF handicap was the most severe. Nearly two thirds of U.S. households were not passed by cable, and even where cable was available, the programming options were largely limited to retransmitted broadcast signals. By 1994, more than 96 percent of U.S. households had access to cable television, and more than 60 percent of all households subscribed to cable. Broadcast signals are now only part of an extensive menu of programming choices available to households that can subscribe to cable television, DBS, MMDS or TVRO services. For these and other reasons alone, the UHF handicap for total audience share may have changed substantially since 1978.

This study replicated the Park study as closely as possible with data from 1993/94. While the handicap of UHF affiliates of ABC, CBS and NBC remained relatively unchanged since the late 1970s, the handicap of other UHF stations disappeared entirely. This result, combined with the substantial increase in the number of stations unaffiliated with one of the three major networks, indicates that these independent and Fox stations can and do compete more effectively for audience share than just fifteen or twenty years ago. The continuing handicap of UHF network affiliates may reflect their status as small-market stations, perhaps unable economically to invest in the extra broadcast facilities necessary to overcome the handicap. Further, both Park's and the present results may be affected by the nature of the sample of markets, and this may explain the unexpected persistence of a UHF handicap for affiliated stations. A more representative sample doubtless would confirm the common-sense hypothesis that the UHF handicap has been greatly reduced for all classes of station.

Park estimated a model of the following general form to explain the observed audience share of broadcast stations in 121 different counties:

$$\text{Share}_{jk} = (\sum a_{ij} D_{ik} / \sum a_{ij} M_{im}) \quad (1)$$

where Share_{jk} refers to the audience share of the k th broadcast station during the j th period of the day;

D_{ik} refers to a dummy variable for the k th broadcast station equal to 1 if the station is of type i and equal to zero otherwise;

M_{im} is a count of the number of broadcast stations of type i in the m th county; and

a_{ij} is a set of estimated parameters that differ for the j th period and the i th type of broadcast station.

Park estimated separate equations for cable and non-cable households and by daypart. Using a similar data set,¹²⁴ only one equation was estimated for each period for all households.¹²⁵ Park examined 10 types of broadcast stations,¹²⁶ and this study examined 8 different types of broadcast sta-

124 Park used county-level audience share data from Arbitron for all broadcast signals received in 121 counties. Arbitron no longer produces such data. This study uses instead Nielsen county-level audience share data for the same 121 counties.

125 The purpose of estimating separate parameters for cable and non-cable households is that cable-households may have better reception of distant broadcast signals, particularly UHF signals, than non-cable households. Many non-cable households in the 1993-1994 Nielsen data set, however, watched programming that was not received from local broadcast stations such as cable networks and broadcast signals from hundreds of miles away. Some Nielsen non-cable households may have had satellite dishes, SMATV, MMDS or some form of non-cable access to distant signals. Some cable households may simply have been mislabeled as non-cable households. Because many non-cable households in the sample were not necessarily excluded from distant signals, all households were treated equally.

126 Specifically, Park examined for VHF and UHF separately the following categories of broadcast stations: local network affiliates, local independent stations, distant network affiliates not blacked out, distant network affiliates that were blacked out and distant independent stations.

tions.¹²⁷ Equation (1) was estimated first under the assumption that coefficients for each type of VHF and UHF station were different. Then a restriction was tested that, while coefficients may vary among independent, Fox and PBS stations, the coefficients were the same for VHF and UHF signals within each of these station categories.¹²⁸ The hypothesis that the VHF and UHF coefficients were the same could not be rejected. That is, no UHF handicap was found for independent, Fox and PBS stations in the 1993/94 data set.

The tables below contrast the all-day and prime-time results with those of Park. These estimates of audience attractiveness are similar to Park's estimates of audience attractiveness for local signals offered on cable. The Economists Incorporated estimates indicate that Fox stations have higher attractiveness than independent stations, and public broadcasting stations have lower attractiveness. The only substantial difference between the Economists Incorporated estimates and Park's estimates is the parameter for the attractiveness of UHF independent stations during prime time. The UHF independent stations in the 1993/94 sample are far more attractive during prime time than those in the 1977/78 data base.

127 VHF and UHF were examined separately for the following categories of broadcast stations: affiliates of ABC, CBS or NBC; public broadcasting stations; Fox affiliates; and independent stations. Only those stations were examined that could likely be received off the air: those for which most of the county was within the Grade B contour or those which had a non-cable household all-day share of 5 percent or greater.

128 For both dayparts, the restriction for each of the three types of stations was tested separately, and all three restrictions were tested jointly. The null hypothesis tested was that the VHF and UHF coefficients were the same for a particular type of station. In none of the tests could the null hypothesis be rejected. In no test was the significance level of the test statistic below 0.50, whereas the significance level would have to be less than 0.05 to reject the null hypotheses.

Table C-1 Broadcast station attractiveness parameters for all dayparts

Household type†	Park	
	Non-cable	Cable
VHF Network Affiliates	1	1
UHF Network Affiliates	.47 (10.1)	.64 (*)
VHF Independent	.57 (3.3)	.56 (3.4)
UHF Independent	.23 (4.0)	.32 (*)
VHF Fox		
UHF Fox		
VHF PBS		
UHF PBS		

Source: See text. Asymptotic t-statistics are in parentheses. Notes: * Constrained estimation, no t-statistic. † Park distinguished between "local" and "distant" signals whereas Economists Incorporated does not. All parameter estimates reported in the table from Park are for local signals. Distant signals had lower audience estimates.

Table C-2 Broadcast station attractiveness parameters for prime time

Household type†	Park	
	Non-cable	Cable
VHF network Affiliates	1 .58	1 .84
UHF network Affiliates	(12.3) .53	(*) .41
VHF independent	(3.7) .11	(3.1) .15
UHF independent	(2.6)	(*)
VHF Fox		
UHF Fox		
VHF PBS		
UHF PBS		

Source: See text. Asymptotic t-statistics are in parentheses. Notes: * Constrained estimation, no t-statistic. † Park distinguished between "local" and "distant" signals whereas Economists Incorporated does not. All parameter estimates reported in the table from Park are for local signals. Distant signals had lower audience estimates.

Appendix D An analysis of program clearances

This appendix presents an analysis of network affiliate station program clearances. The analysis was carried out using data for virtually all ABC, CBS and NBC affiliates in markets with three or more commercial broadcast stations and for all network-owned stations. ABC, CBS and NBC each provided data on the hours of programs it offered and the number cleared by each of its affiliates for four weeks during 1994. The sample weeks were the seven-day periods commencing on the first Sunday of March and the second Sunday of July, October and November. Obviously, only those programs offered and cleared during the sample weeks were counted. "Live" and delayed clearances were combined.

Clearance data for 446 network affiliates located in markets with 3 or more commercial stations and 21 network-owned stations for the year 1994 were employed in carrying out this study.¹²⁹ Clearance behavior of stations in markets with less than three commercial stations is likely to be different from that of stations in markets with three or more commercial stations. In particular, in the former situation a station is likely to be affiliated with more than one network. Since these stations can take the most popular programs from more than one network, they may carry more network programs, while taking less from any single network, than do stations in markets where each of the three networks has a primary affiliation. In these situations, failure to clear a network program need not mean that a non-network program is being carried in its place.

Average clearance rates by daypart are shown in Table D-1. The clearance rate is defined as the number of hours of network programming cleared divided by the number of hours of network programming offered. Clearance

¹²⁹ A few network affiliates in these markets were excluded from the analysis if they changed affiliation during 1994. Stations that agreed to affiliation changes during 1994 but did not change affiliation until Jan. 1995 are included in the analysis. In addition, a few markets were excluded from the analysis if they contained more than one affiliate of the same network.